# WASTEWATER MANAGEMENT PLAN FOR SALEM COUNTY, NEW JERSEY LOWER DELAWARE WATER QUALITY MANAGEMENT PLANNING AREA

# SEPTIC MANAGEMENT PLAN

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## SEPTIC MANAGEMENT PLAN

#### I. Introduction

Pursuant to the adoption of the new Water Quality Management Planning (WQMP) rules at N.J.A.C. 7:15-1.1 et.seq., Water Quality Management Planning Agencies are required to implement a Septic Management Plan (SMP) for areas within their jurisdictions that are served by individual subsurface sewage disposal systems (ISSDS's) commonly known as septic systems. N.J.A.C 7:15-5.25(e)3.

A SMP can be implemented by the County WMP agency, County Health Department or individual municipalities. SMP's submitted for review must define the framework and procedures for the notification to property owners for routine maintenance of all ISSDS's within the County. Routine maintenance includes regular pumping out of the ISSDS's at an appropriate frequency

Effective data management is the only way that municipalities and counties can ensure that the septic systems are being permitted, installed, operated, and maintained according to the State regulations and recommended maintenance schedules and procedures. This is particularly true as more innovative and alternative types of on-site systems are encouraged and permitted. Also, as environmental quality monitoring is required, a central database is necessary to make it easy for managers to identify potential issues and address them in a timely fashion.

This chapter outlines Salem County's approach to initiating a Septic Management Program as part of the Salem County Wastewater Management Plan (WMP). The Program includes but is not limited to the following:

- Identify newly constructed and/or repaired ISSDS's within the County's municipalities;
- Create and maintain a database system to inventory ISSDS's and track routine maintenance:
- Establish a procedure for notifying system owners of the recommended maintenance;
- Provide educational and program information to all residents served by ISSDS's.

#### **II. Septic Management Data Elements**

Implementing a SMP is a straightforward process, which will be initiated at a basic level and expanded in the future to meet new regulatory requirements. The procedures can be established on a repeatable cycle and recorded using a database program to organize ISSDS inventories and track maintenance activities. Septic system data management historically consisted of filing cabinets organized with paper records. This method was very useful for organizing data on a parcel-by-parcel basis and is much easier and less expensive to institute than an electronic database. It required little capital expense or training of personnel when compared with more comprehensive systems.

The SCHD has historically utilized a manual filing system to maintain septic system information through the plan review, permit and inspection process. The following information is typically provided through this process:

- Permit Information
- General Site Information
- Site Evaluation Information
- Treatment System Information
- Inspection report Data

The information required to populate a SMP database is generally available within the existing files. However, additional data fields will be required for the monitoring septic system maintenance, tracking and notification processes. The following data will be collected and a database system will be utilized to create an inventory of newly constructed and/or repaired ISSDS's within the County as part of the SMP.

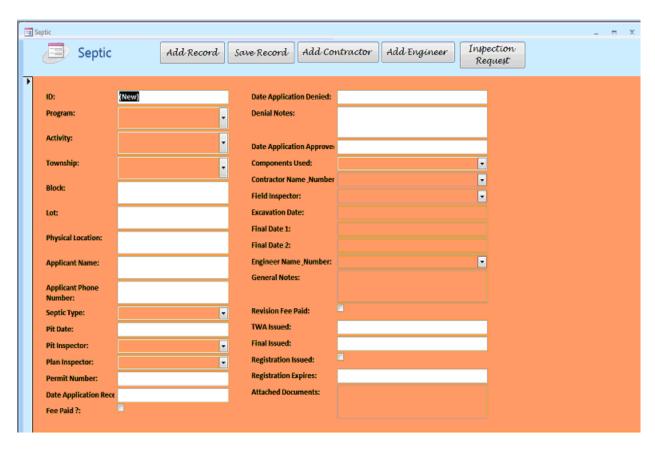
- Municipality where ISSDS is located
- Block / Lot of ISSDS
- Name of Responsible Party / Owner of system
- Address of Responsible Party / Owner of system
- System Pump Out Interval requirement (Initially set at 3 years)
- Date for sending notice (generally 3-6 months prior to end pump out interval
- Date of System Pump Out
- Date when pump out verification was received.

The details of setting up the database and logistics behind the notification process are currently under review by the Salem County Planning Department and the Salem County Health Department. Database management requires bringing training in the software applications and potentially an initial capital outlay to implement them. Depending on the volume of newly constructed ISSDS's as well as the number of existing systems throughout Salem County, the implementation of the SMP will likely require additional staffing or the reallocation of existing resources. Current fiscal constraints may require ISSDS's to be grouped in batches and incorporated into the SMP incrementally. This approach will divide the workload over a period of years and allow for scheduling of resources on a monthly or quarterly basis.

The means and methods for populating the entire existing inventory of ISSDS's are not being considered at this time. This greatly depends on the degree to which an inventory already exists and which entities possess the relevant information, such as the Health Department, Planning Boards, tax assessors, or others. In addition, current economic conditions and the budgetary constraints are also important factors that limit the completion of a comprehensive inventory of all of the existing septic systems in the County. The current plan to incorporate existing ISSDS's will include identifying existing systems during real estate transactions, if a compliance review of the system is requested. Systems that require a permit for repair or alteration will also be incorporated at the time of the permit application process. Newly permitted and constructed septic systems will be entered into the database as they receive final approval.

## III. Database Development

The Salem County Health Department is currently responsible for the review of applications and permitting for all ISSDS's within Salem County. The permits are reviewed in accordance with the State standards for the proper design and installation of a properly functioning septic system according to the rules found at N.J.A.C.7:9A-3.1 et seq. The SCHD now utilizes an Access database to maintain the permit and related information regarding existing septic systems. This data includes general information regarding the dates of specific phases of the permit and construction process. A screen shot of one of the current database input fields are shown below.



File copies of plans, permit applications, inspection reports and related site specific information are not included within the database. This information is organized in a hardcopy format and filed accordingly. Since the database was created approximately 3 years ago, in 2011, the database has been populated with information for newly constructed systems or existing systems that have been repaired or altered. The SCHD has input preliminary information on 577 systems. Preliminary information is included for new systems, systems that required repair or alterations as well as Advanced Treatment Units (ATU's). A summary of the number of existing systems included within the database is identified in Table 10-1 below.

Table 10-1: Existing Septic Systems Monitored				
No. of Systems	Type of Application			
194	New System			
175	Repaired System			
197	Alteration to System			
11	Advanced Treatment Unit			
577	Total No. of System			
192	Average Systems /year Logged			

Management of information being entered into the system is considered either passive or active. Data for conventional septic systems is passive, which is characterized by the logging of parcel information and filing of permits and plans. Whereas, the management of systems utilizing advanced technology units (ATU's) is more active. The ATU systems are reviewed on an annual basis to monitor permit status and verify whether the required service and maintenance contracts are current and to ensure compliance with permitting requirements.

The SCHD's existing database is currently structured to allow for basic information management of conventional septic systems and more active monitoring of systems with ATU's. Objects in the database include Tables, Forms and Reports. Tables are the basic components of the database. The Tables represent the underlying organizational structure for data. Forms are used for reviewing data on the computer screen and to facilitate data entry. As such, a form will typically display information from a single record at a time. The Reports are designed to organize and print out data. Database tools are available to perform queries of the data and can be utilized to identify systems that are nearing their recommended pump out period. Modifications to the SCHD's current system architecture will be required to include more comprehensive data management and notification process for conventional septic systems. Some of these fields include the following:

- □ Notification Sent Date:
- □ Maintenance Record Received Date:
- □ Follow up Notice Date
- □ Notes Field for logging calls with homeowner or service provider
- □ Create Specific reports to identify status of notification process
- □ Set Next Maintenance Period Date

#### **IV. Notification Process**

Once those properties being served by ISSDS's are identified and inventoried, tracking of regular maintenance and pump out periods can be scheduled on quarterly basis. Staffing will be assigned to complete the task during predetermined periods.

Upon initiating the SMP, a notification will be sent describing the recommendations, including a pump-out schedule and providing educational material, as ISSDS's are entered into the database. Where the number of ISSDS's to be inventoried and tracked is small, the notification and pumping schedule can be the same for all. Notices will be grouped and sent out in manageable numbers each month or quarter, including over a multi-year period, with appropriately assigned pump-out schedules, thereby staggering the workload into smaller, more reasonable increments.

It is anticipated that the recommended pump out period will be initially set at 3 years. The frequency of the pump-outs may be adjusted on a case-by-case basis, depending on the site-specific information that may be available, such as the size of the system and the number of people living in the dwelling.

Three to six months prior to the recommended pump out date, a helpful reminder (Appendix) will be sent to the responsible party recommending pump out and requesting confirmation that the system has been maintained (see Appendix). In an effort to improve the response from system owner, the County will also coordinate with licensed haulers to obtain confirmation that the systems have been maintained. Once proof of the pump-out is received (such as a copy of a receipt from a licensed hauler), the date will be noted and that ISSDS "account" will be deemed current until the next scheduled maintenance action.

Only ISSDS's that discharge 2,000 gallons per day (gpd) or less are subject to the Septic Management Plan provisions of the WQMP rules found at N.J.A.C. 7:15. Onsite wastewater treatment systems that discharge greater than 2,000 gpd are regulated by the NJDEP through NJPDES permits.

#### V. Alternative Treatment Units (ATU)

For systems that utilize ATU's, the Salem County Health Department currently has internal procedures in place to monitor the permit status and verify whether service contracts are current to ensure compliance with permitting requirements. Systems that do not comply with the permitting requirements are sent notices of violation and enforcement measures are implemented by the SCHD in accordance with the Water Pollution Control Act, when needed. The SCHD, does not, however, currently have the authority to enforce the requirements for maintaining conventional septic systems. Information received from the residents for populating the inventory database with maintenance information will rely on the public's willingness to respond to the notifications and provide verification that the system has been serviced.

#### VI. Program Staffing Requirements

Implementation of a septic management plan and the selection of a database must also take into consideration other realities, such as available budget, staff availability, staff time, training, and the true needs of the management program. As a management entity takes on more of the requirements of an active program, the need to maintain, monitor, and report on system information has the potential to increase dramatically.

Salem County has a population of approximately 66,000 residents. Seven (7) wastewater treatment facilities, identified in Chapter 6, Table 6-1 of the County WMP, currently provide treatment for approximately 50% of the residents within the County. As a result, it is estimated that 33,000 residents are currently utilizing individual subsurface sewage disposal systems. This equates to approximately 11,000 to 12,000 systems, assuming 2.75 – 3 persons per household.

The staffing required to initially populate the database with comprehensive information of all existing ISSDS's within Salem County is significant and is not being proposed at this time. It is estimated that the time required to locate the files, review the information and input the various fields of data into the system could take 30-60 minutes per system, depending on how extensive the details of the system may be for each application. The inclusion of septic tank design information, the number of residents per home etc., require more than a cursory review. This could result in the need for 6,000- 12,000 staff hours for initially populating the comprehensive database with the entire historical records of septic approvals currently on file with the Health Department.

Once a completed database is in place, the notification process could require 1 day per month when sending out 1,000 notices per month over the course of a year. Follow up for the verification of maintenance and updating the database could potentially require the addition of a full time employee, based on the 1,000 notices per month and spending even 5-10 minutes per notice for tracking per month.

As indicated in previous sections above, the means and methods for populating the entire existing inventory of ISSDS's are not being considered at this time. The initial capital required to populate the database with existing system information and staff resources to maintain, monitor and report on system information are not available. The current plan to incorporate an existing septic system will include identifying existing systems that require a permit for repair or alteration at the time of the permit application process, or upon an inspection generated on the sale or resale of a property.

The SCHD has currently populated the database with approximately 577 systems. However, only those utilizing ATU's are being monitored annually for compliance with operating permit conditions. The current number of systems within the database equates to 192 systems being added to the database on an annual basis, according to Table 10-1 above.

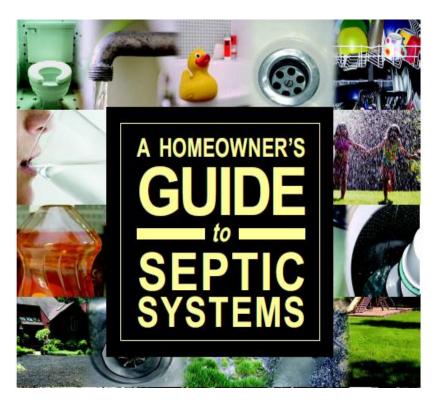
Considering the information currently available and the average number of systems that have been entered into the database, the following table 10-2 reflects the projected number systems that could be added to the database over a 6-year planning period. The database information will be reevaluated and an updated table will be provided when the WMP is renewed. Also, included are the estimated additional staff hours that would be necessary to initiate the SMP.

Table 10-2: Projected Database Staffing Requirements						
Year No.	No. of Systems added Per Year	Number of systems Logged	Notices Sent per Quarter (*)	Staffing Hours/Quarter Required (**)		
1		577	48	8		
2	192	769	64	11		
3	192	961	80	13		
4	192	1153	96	16		
5	192	1345	112	19		
6	192	1537	128	21		

<sup>(\*)</sup> Assumes 12 quarters over a 3 year Maintenance Period (\*\*) Assumes 10 minutes per application for notice, follow up and database management

#### **VII. Public Education**

The SCHD provides system owners with educational material and references to additional resource material during the permit process. The information provided is included within the Homeowners Guide to Septic systems referenced below. This information is for regular septic systems only, and not for Alternative Treatment Units.



The Home Owners Guide to Septic Systems is a modification to the US EPA's Homeowner's Guide to Septic Systems (EPA document # EPA-832-B-02-005 December 2002). This information is intended for regular septic systems only, and not for Alternative Treatment Units.

The guide provides specific system owners with information on the following topics:

- Your Septic System is Your Responsibility
- Septic System Dos and Don'ts
- Rules and Regulations
- How Does It Work?
- Why Should I Maintain My Septic System?
- How Do I Maintain My Septic System?
- What Can Make My System Fail?

In addition to this guide, system owners are referred to the NJDEP's non-point pollution control website - <a href="http://www.nj.gov/dep/dwq/owmp\_main.htm">http://www.nj.gov/dep/dwq/owmp\_main.htm</a> for additional information and documentation, as well as other available sources. These resources include the following:

- 1. **NJDEP's non-point pollution control website**:
  - a. <a href="http://www.nj.gov/dep/dwq/owmpmain.htm">http://www.nj.gov/dep/dwq/owmpmain.htm</a>
- 2. **Local Health Department**:
  - a. www.nj.gov/health/lh/directory/lhdselectcounty.htm
- 3. New Jersey DEP, Onsite Wastewater Management Program:
  - a. www.nj.gov/dep/dwq/sep\_site.htm
- 4. **EPA Onsite/Decentralized Management Homepage**:
  - a. www.epa.gov/owm/onsite
- 5. National Small Flows Clearinghouse:
  - a. www.nesc.wvu.edu
- 6. Rural Community Assistance Program:
  - a. www.rcap.org
- 7. National Onsite Wastewater Recycling Association, Inc.:
  - a. www.nowra.org
- 8. **Septic Yellow Pages**:
  - a. www.septicyellowpages.com
- 9. National Association of Wastewater Transporters:
  - a. www.nawt.org
- 10. Clean Water New Jersey:
  - a. www.cleanwaternj.org

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#### **VIII. Summary**

The Septic Management Plan outlined above reflects Salem County's approach to initiating a SMP in accordance with the WQMP requirements. This includes but is not limited to the following:

- Modifying the Salem County Health Department's existing database to include additional fields for information related to notification for maintenance of conventional septic system; (it is now up to the individual homeowner to monitor and maintain the system after approval by the HD)
- Identify newly constructed and/or repaired ISSDS's as permits are issued within the County
- Maintain the database system to inventory ISSDS's and track routine maintenance;
- Establish a procedure for notifying system owners of the recommended maintenance;
- Provide educational and program information to all residents served by ISSDS's that will provide guidance on maintenance of the septic system and frequency of pump outs;
- Prepare and print annual report of compliance: (County working with NJDEP to implement electronic reporting system consistent with N.J.A. C. 7:9A-3.15)

The proposed Septic Management Plan is an initial step toward identifying existing ISSDS's within Salem County. Based on the above projections in Table 10-2, the staffing required to setup and initiate the initial phase of the septic management plan would require approximately 3 staff days per quarter, over a 6-year planning period. However, based on the estimated number of existing systems within the County, the reality is that management of this program and maintenance of the database could grow to be a significant commitment of County resources. Salem County does not currently have the financial and/or staffing resources to follow through with this unfunded mandate or the authority to enforce it.

The Salem County Health Department (SCHD) is dedicated to the promotion and protection of the public's health as well as the enforcing laws and regulations that protect the health and ensure the safety of the public. As indicated in previous sections above, the SCHD does not currently have the authority to enforce the requirements for maintaining conventional septic systems. The Septic Management Program will be a cooperative effort between the Salem County Departments of Health and Planning. This program will rely on the individual system owner's willingness to voluntarily respond to notices send by the SCHD and Planning Board and on the results of an ongoing public education effort. The results of this program will be reviewed and recommendations for program improvements will be incorporated with future WMP revisions.

## **Appendix A-Attachment No.1**

#### SAMPLE NOTIFICATION LETTER

Dear Salem County homeowner,

We need your help.

Have you ever caught a glimpse of a bald eagle gliding over the Mannington Meadows in search of prey? Ever drop a fish hook into one of Salem County's beautiful streams or lakes? Maybe you wait for hummingbirds to migrate here every Spring? Protecting the quality of our water in Salem County is critical to preserving our rural character. Preventing pollution of our surface water and underground aquifers is our priority.

And, this is where you can help.

Salem County is launching a voluntary program in which we are asking homeowners with septic systems to pump out their systems at least once every three years. This one simple action will reduce what is called 'non point source pollution', AND extend the life of your septic system and reduce repairs bills. No one needs a \$10,000 bill to replace a septic system.

We will make it as easy as possible for you to make this voluntary commitment to help. Attached is a form with the Lot and Block information for your septic system and the certification date from the Salem County Department of Health.

- IF YOU HAVE HAD YOUR SYSTEM PUMPED OUT WITHIN THE LAST THREE YEARS, please fill out the attached form, listing the date of service and identifying the company that performed the pump out. If you have it, include copy of the receipt for the service. Sign and mail the form back to us. We will remind you in advance of the next three-year pump-out date in 2017.
- IF YOU HAVE NOT PUMPED OUT YOUR SEPTIC SYSTEM WITHIN THE LAST THREE YEARS, we've attached a list of local service providers. You are not required to use a company on the list; it is just to help get you started. Once you have your system pumped out, sign and mail the form back to us with the date of service, the name of the company that provided the service, and a copy of the receipt. We will remind you in advance of the next three-year pump-out date in 2017.

We hope you will voluntarily take part in this effort to protect Salem County's waterways and underground aquifers. You will be helping to preserve the quality of our rural resources, while protecting the expensive investment you have in your own septic system.

Salem County Department of Health and Salem County Planning Department

# **Appendix A-Attachment No.2**

## SAMPLE NOTIFICATION AND RESPONSE POSTCARD

Name:					File No:	
Block	Lot		Municipality			
Address				Phon	ne	
Last Service		Sept	otic Hauler		Receipt	
Other Service Performed (if any)						
Date of next Scheduled Service:						
Name and address of owner if different from above:						
The County of Salem appreciates your attention to this important task of maintaining your Septic System. Your effort is essential to maintaining our water quality and a healthy environment.  For any questions please contact the Salem County Department of Health at 856-935-7510						